

May 24, 2006

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SUBJECT: Option Package 1: 2030 Express Bus Service with General Purpose
Lanes

COPY:

This memorandum describes, for travel and patronage demand modeling purposes only, CRC Option Package 1: 2030 Express Bus with General Purpose Lanes. This memo includes four attachments: 1) BIA highway capacities, 2) BIA ramp metering rates, 3) transit route network, and 4) transit line listings.

Option Package 1: 2030 Express Bus and General Purpose Lanes

1.1 Highway Network Description

Option Package 1 builds upon the 2030 No-Build option package. All highway improvements in addition to No-Build conditions would occur along I-5 and its ramps within the Bridge Influence Area. Attachment #1 provides a diagram of the proposed highway improvements and lane capacities for travel demand modeling purposes only.

Additional highway changes are described in section 1.5.

1.2 Highway On-Ramp Metering Rates

Attachment #2 provides a listing of on-ramp metering rates to be modeled for the General Purpose Lanes option. Please refer to section 1.5 for additional ramp metering changes.

1.3 Transit Network Description

The Express Bus is defined as suburban Clark County express bus service along I-5, operating primarily during morning and evening commute periods serving downtown Portland, major light rail transit stations, and the Rose Quarter.

The network is to be modeled in conjunction with the above roadway network (and for future option packages, with different highway scenarios that include limited improvements and expanded freeway capacity across the Columbia River and enhancements through North Portland). The transit network is based on a combination of the existing transit system and enhancements proposed in past studies.

TriMet: The TriMet network is similar to that described in the 2030 No-Build. It is based on the TriMet 2030 Financially Constrained Transit Network. This assumes a 1.5% per year growth in service hours for the TriMet system. The system includes the extension of the Central City Streetcar to South Waterfront, the Max Green Line in Clackamas County, and the Washington County Commuter Rail.

C-TRAN: The C-TRAN network includes extensive express bus service connecting Clark County and downtown Portland and a general increase in transit coverage and operating hours. It includes existing and new park-and-ride lots, expanded express routes service with more routes and longer operating hours, and improved local service with better coverage and more off-peak service.

1.4 Express Bus Transit Network

Figure 1 depicts the CRC regional Express Bus network (both express and Clark County local service), the transit element of Option Package 1. The system includes express bus service via I-5 and I-205 to Portland.

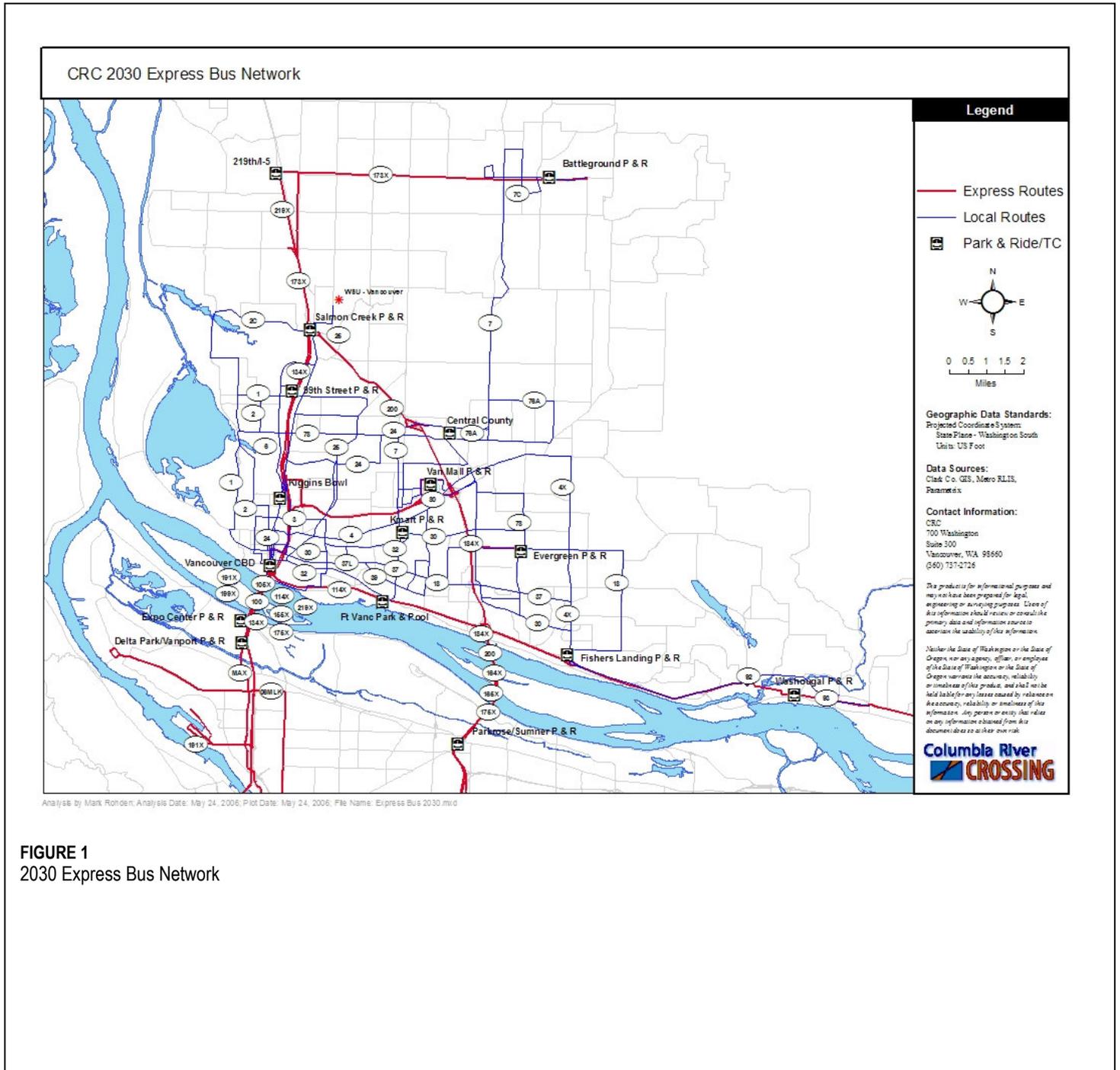


FIGURE 1
2030 Express Bus Network

Table 1 lists the major characteristics of the 2030 Express Bus Network Service Plan. Frequency of bus service is described in attachments 3 and 4.

TABLE 1.
Express Bus Plan Operating Summary

CHARACTERISTICS	2030 EXPRESS BUS
C-TRAN BUS ROUTES	40 ROUTES
C-TRAN ANNUAL SERVICE HOURS	650,000 TOTAL (515,000 FIXED ROUTE, 135,000 DEMAND RESPONSIVE)
C-TRAN WEEKDAY HOURS OF OPERATION	5 AM - 12 AM
C-TRAN DAYS OF OPERATION	7 DAYS
PARK AND RIDE LOTS (CLARK COUNTY)	10
PARK AND RIDE SPACES (CLARK COUNTY)	4,500 SPACES
TRANSIT CENTERS	C-TRAN AOM, FISHERS LANDING, DOWNTOWN VANCOUVER
NUMBER OF BUSES CROSSING INTERSTATE BRIDGE DURING THE PEAK HOUR (1 DIRECTION)	42

1.5 Express Bus High Occupancy Vehicle (HOV) Facility Descriptions

The 1999 Clark County HOV Study presented a recommended year 2017, regional HOV system. From that recommended system, it was assumed for this study that only those facility improvements that directly support express bus service, rather than general use of HOV lanes by automobiles, would be incorporated in the Express Bus network. Where practicable, all HOV vehicle types will be allowed to use the express bus facilities. Only the following facilities meet this criterion and will be modeled and included in conceptual designs:

- Single-lane ramp meter bypasses at the southbound I-5 on-ramps from 99th Street and Main Street interchanges.
- Direct-connect HOV drop ramps for express buses only and a southbound I-5 ramp meter by pass lane for HOVs as part of new I-5/134th/139th interchange reconfiguration.

1.6 Park-and-Ride Facilities

The C-TRAN Express Bus network includes new park-and-ride capacity at both existing lots and at new park-and-ride lots. It also includes express bus service from those lots to downtown Portland and Gateway Transit Center and shuttle service between the lots.

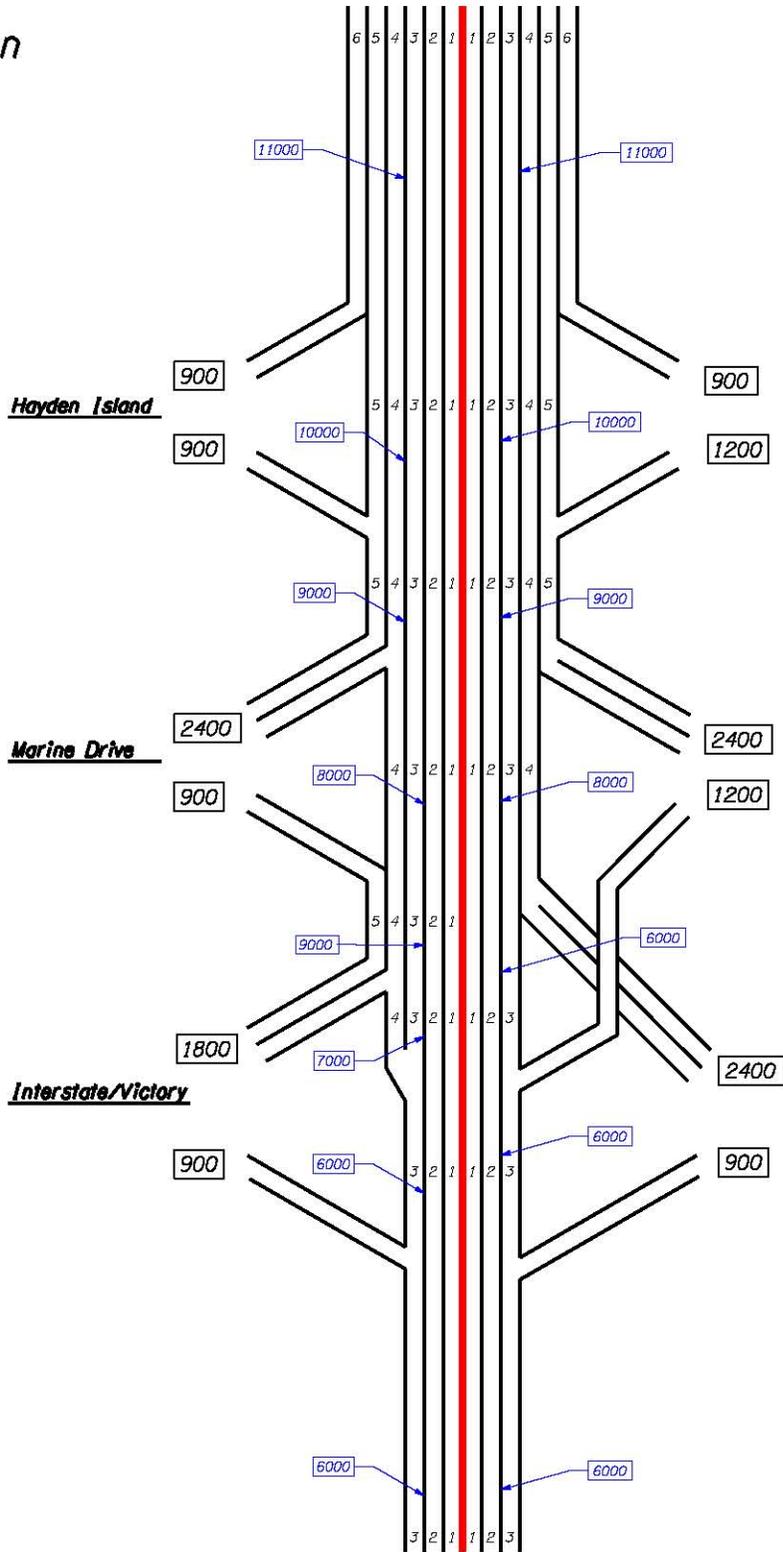
The network includes four new facilities resulting in three more lots and more than twice as many parking spaces as compared to today (refer to Table 2). New lots would be built at 219th Street, 99th Street, and the Kiggins Bowl area serving I-5, and at approximately 78th Street/Padden Parkway serving I-205. The Kiggins Bowl park-and-ride replaces the BPA/Ross facility.

Table 2.
Comparison of Express Bus and Existing Clark County Park-and-Ride Facilities

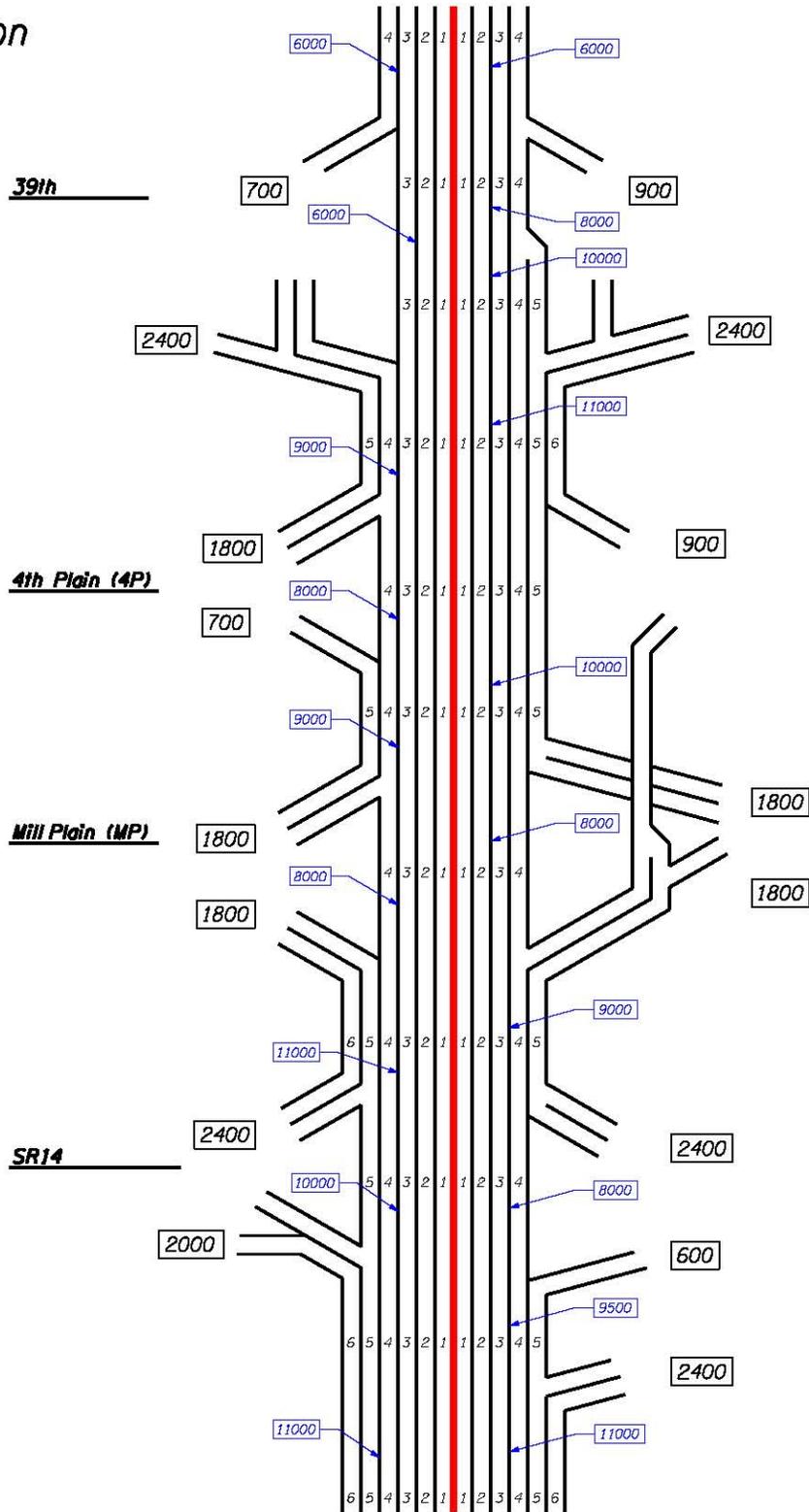
2006 EXISTING CONDITIONS		2030 EXPRESS BUS	
NAME	SPACES	NAME	SPACES
FISHER'S LANDING TRANSIT CENTER	566	FISHER'S LANDING TRANSIT CENTER	900
SALMON CREEK PARK & RIDE	484	SALMON CREEK PARK & RIDE	600
EVERGREEN PARK & RIDE	231	EVERGREEN PARK & RIDE	300
BPA/ROSS PARK & RIDE	144	BPA/ROSS PARK & RIDE	0
FORT VANCOUVER PARK & POOL	33	FORT VANCOUVER PARK & POOL	na
BATTLE GROUND PARK & RIDE	27	BATTLE GROUND PARK & RIDE	100
WASHOUGAL PARK & RIDE	20	WASHOUGAL PARK & RIDE	300
K-MART PARK & RIDE	100	K-MART PARK & RIDE	100
99TH STREET PARK & RIDE	N/A	99TH STREET PARK & RIDE	600
CENTRAL CO. (NE 78 TH ST/I-205)	N/A	CENTRAL CO. (NE 78 TH ST/I-205)	500
219 TH /1-5	N/A	219 TH /1-5	600
KIGGINS BOWL	N/A	KIGGINS BOWL	500
TOTAL	1,605	TOTAL	4,500

Although planned park-and-ride capacity will be used as an input in the travel demand modeling, park-and-ride lot capacity will not be constrained to input levels by the model. Through an equilibration procedure, park-and-ride capacity will be adjusted to accommodate and reflect transit ridership demand. This equilibration process allows transit demand under express bus and LRT options to be compared fairly.

Oregon



Washington



Comparison of Route Characteristics

CRC TSM Express Bus Plan Year 2030														EXPRESS BUS DETAILS					Notes	
Route #	Description	Type	Peak Headway	Off-Peak Headway	Hours of Operation	Veh per 1 Pk Hr	Veh per 4 pk hrs	Veh 1 OffPeak Hr	Veh during off peak	Days of Service	Total Weekday Service Hours	Saturday Service Hours	Sunday Service Hours	Avg Wkday Bdngs 4-Hour Peak Ridership	Network Based On	I-5 River Crossings 1 Peak Hour	I-205 River Crossings 1 Peak Hr	Origin/Destination		Route Modification
TM 6 Max Yellow	MLK- Ptlid to 7th	L	10	12											Opt 6	6				used same headways as existing conditions
Max Red	Expo to Ptlid (CNRT)	LR	5	10											Opt 6					
	PDX to Ptlid	LR	15	15											Opt 6					
1	Fruit Valley	L	30	30	16	2	8	2	24		32	19.2	11.2		Alt 5			VanCBD/99th P&R	VanCBD/99th P&R via Fruit Valley	
2	Lincoln	L	30	30	16	1	4	2	24		28	16.8	9.8		Alt 5			VanCBD/99th P&R	Via Lincoln	
2C	Felida/Salmon Creek Circulator	L	60	60	16	1	4	1	12		16	9.6	5.6		Alt 5			VanCBD/99th P&R	Via Felida	
3	City Center	L	15	15	18	3	12	3	42		54	32.4	18.9		Alt 5			VanCBD/Assembly		
4	Fourth Plain - DT/Van Mall	L	15	15	16	5	20	4	48	6	68	40.8	0		Alt 5			VanMall/VanCBD		
4X	Fourth Plain - DT/Fisher's Landing	L	30	30	18	4	16	4	56		72	43.2	25.2		Alt 5			Fishers/VanCBD		
4L	Fourth Plain - DT/Van Mall (Limited Stop)	L	15	30	16	5	20	2	24	5	44	0	0		Alt 5			VanMall/VanCBD		
6	Hazel Dell to 99th	L	15	15	18	4	16	3	42		58	34.8	20.3		Alt 5			99th/VanCBD		
7	Battle Ground	R	30	30	14	4	16	3	30		46	27.6	16.1		Alt 5			CCoP&R/BG		
7C	Battle Ground Circulator	L	30	30	14	1	4	1	10		14	8.4	4.9		Alt 5					
18	Fishers to Med. Center	L	30	30	18	3	12	3	42	6	54	32.4	0		Alt 5			Fishers/SWMed Ctr		
24	CC P&R/downtown Vancouver via Minnehaha	L	20	30	16	3	12	2	24	6	36	21.6	0		Alt 5			CCoP&R/VanCBD	CC P&R/downtown Vancouver via Minnehaha	
25	St Johns/Clark Co/99th/WSU	L	20	20	18	4	16	3	42		58	34.8	20.3		Alt 5			Clark/WSU	X Extended to WSU, Clark Co/99thP&R/WSU via St. John	
30	Burton (Fishers to VanCBD)	L	15	20	16	8	32	6	72		104	62.4	36.4		Alt 5			Fishers/VanCBD		
32	Van Mall/VanCBD (Interline w/ 80)	L	15	30	18	5	20	3	42		62	37.2	21.7		Alt 5			Van Mall/VanCBD		
37	Mill Plain	L	15	15	18	6	24	5	70		94	56.4	32.9		Alt 5			Fishers/VanCBD		
37L	Mill Plain (Limited Stop)	L	15	15	16	6	24	5	60	6	84	50.4	0		Alt 5			Fishers/VanCBD		
39	Clark Coll/Med. Center/Van Mall	L	30	30	18	3	12	3	42	6	54	32.4	0		Alt 5			Clark/VanMall		
71	Highway 99	L	10	15	16	5	20	3	36		56	33.6	19.6		Opt 6			Salmon Ck/VanCBD		
76A	Orchards/Eastridge	L	15	30	16	5	20	3	36		56	33.6	19.6		Alt 5			Kiggins/Eastridge	Kiggins/Van Mall/Eastridge	
76B	Orchards/Eastridge	L	15	30	16	5	20	3	36	6	56	33.6	0		Alt 5			Kiggins/Eastridge	Kiggins/Van Mall/Eastridge	
78	78th Street/Van Mall/Evergreen	L	30	30	16	4	16	3	36	6	52	31.2	0		Alt 5			99th P&R/Evergn		
80	Van Mall/112th (Interline with 32)	L	15	30	16	5	20	2	24		44	26.4	15.4		Alt 5			VanMall/WyeastMS	Interline with 32	
92	Camas/Washougal	L	30	60	14	3	12	1	10		22	13.2	7.7		Alt 5			Fishers/Washougal		
93	SE 34th/Lacamas	L	60	60	14	1	4	1	10		14	8.4	4.9		Opt 6			Camas/Fishers		
100	I-5 Shuttle (PIR/Kiggins/99th/134th/219th)	C	30	60	14	4	16	2	20		36	21.6	12.6		Alt 5	4		219thP&R/PIR	X PIR/Kiggins/99th/134th/219th	
105X	I-5 Shuttle to PCBD	C	10	30	14	5	20	2	20		40	20	14		Opt 6	5		VanCBD/PCBD	Interlined with 114X and 173X	
114X	Camas/Washougal Exp	C	20	60	14	6	24	0	0	5	24				Opt 6	*		Washougal/VanCBD	Interlined with 105X	
134X	Salmon Creek Exp to PCBD	PC	12	60	14	6	24	2	20	5	44				Opt 6	6		SC P&R/PCBD	deleted 135	
155X	Kiggins Exp to Ptlid	PC	10	60	14	7	28	1	10	5	38				Opt 6	7		Kiggins/PCBD	X NEW stops in Lloyd District, same line length	
164X	Fishers Exp to PCBD	PC	7.5	60	14	11	44	2	20	5	64				Opt 6	8		Fishers/PCBD		
165X	Fishers/Gateway Limited	C	20	30	14	3	12	2	20	6	32	16	11.2		Opt 6	3		Fishers/Gateway		
173X	BG Exp/VanCBD	L	20	60	14	4	16	1	10	5	26				Opt 6	*		BG P&R/VanCBD	Interlines with 105X	
175X	Evergreen Exp to PCBD	PC	10	60	14	7	28	2	20	5	48				Opt 6	6		Evgn/ PCBD	deleted 179	
183X	Central P&R Express to PCBD	C	15	60	14	4	16	1	10	5	26				Opt 6	4		CCo P&R/PCBD	X Extend to Portland CBD (Opt 6 183 Line length)	
190X	Van Mall/Kiggins/Marquam Hill	PC	30	60	12	2	8	1	8	5	16				Opt 6	2		VanMall/OHSU	X Kiggins replaces BPA VanMall/Kiggins/Marquam Hill	
191X	SWAN ISLAND EXP	PC	30	60	12	2	8	1	8	5	16				Opt 6	2		Kmart/Swan Island	X Kmart/Kiggins/Swan Island	
199X	99th Express to PCBD	PC	15	60	14	4	16	1	10	5	26				Opt 6	4		99th/PCBD		
200	I-205 Shuttle	L	30	60	14	3	12	2	20		32	19.2	11.2		New	4		Salmon/Parkrose	X Salmon Cr/Central P&R/Van Mall/Evgn/Parkrose	
219X	219th Express to Ptlid	PC	15	60	14	6	24	2	20	5	44				Opt 6	6		219th P&R/PCBD		
Totals:						680		1110			1790	817.2	339.5			42	25			

Annualized

1790

456450 42494 17654 516598

Modified Headways

Crosses Columbia River on I-205

Crosses Columbia River on I-5

Comparison of Route Characteristics

CRC TSM Express Bus Year 2030					
Transit Line	Route Description	Peak Headway	Off-Peak Headway	Line Group	Network Based On
LIGHT RAIL					
01POEXC - Yellow Line Cross	LRT - (PCBD/PSU-Expo) via cross mall	N/A	N/A		Same as CRC NoBuild
01POEXM - Yellow Line Mall	LRT - (PCBD/PSU-Expo) via mall	10	12	Yellow MAX	Same as CRC NoBuild
01POVA	LRT - (PCBD-Vancouver)	N/A	N/A		Same as CRC NoBuild
01POMI - Orange Line	LRT - (PCBD/UNION ST.-Milw) via mall assumes Main St. LPA alignment	N/A	N/A		Same as CRC NoBuild
01MVAN	MILW-VAN	N/A	N/A		Same as CRC NoBuild
01BANF	LRT - (PCBD-Gresham)	N/A	N/A		Same as CRC NoBuild
01HGAP - Blue Line	LRT - (Hillsboro-Gresham) via cross-mall	5	15	Blue MAX	Same as CRC NoBuild
01BANG - Blue Tripper	LRT - (PCBD-Gateway) via cross-mall	N/A	N/A		Same as CRC NoBuild
01PDX	LRT - (PCBD-PIA)	N/A	N/A		Same as CRC NoBuild
01PDXB - Red Line	LRT - (PIA-BTC) via cross-mall	15	15	Red MAX	Same as CRC NoBuild
01I205 - Green Line	LRT - (PCBD/PSU-CTC) via mall	7.5	15	Green MAX	Same as CRC NoBuild
01MALL - Shuttle	LRT - (Mall Shuttle)	15	15	Shuttle MAX	Same as CRC NoBuild
01EXMI - Orange Line	LRT - (EXPO-MILW) via mall	10	15	Orange MAX	Same as CRC NoBuild
COMMUTER RAIL					
01COMR	Commuter Rail (BTC-Wilsonville)	30	N/A	Other Rail	Same as CRC NoBuild
STREETCAR					
01SCNW	Streetcar (NW23rd-Gibbs/N.Macadam)	10	10	Other Rail	Same as CRC NoBuild
01ESC	Streetcar - (Eastside Connector)				Same as CRC NoBuild
01SCLP Caruthers Bridge	Streetcar - Loop (01SCAR & 01ESC Combined) Caruthers Bridge	10	10	Other Rail	Same as CRC NoBuild
01SCOM OMSI turnaround	Streetcar - MOS2 (OMSI turnaround)	N/A	N/A		Same as CRC NoBuild
01SCLD LLOYD turnaround	Streetcar - MOS1 (LLOYD turnaround)	N/A	N/A		Same as CRC NoBuild
TRAM					
01TRAM	Tram (North Macadam-OHSU)	5	5	Other Rail	Same as CRC NoBuild
011TRAMBR	Tram (Barbur-OHSU)				Same as CRC NoBuild
TRI-MET BUSES					
02G-PUP	Greeley - (PCBD-UofP)	10	30	North Portland TM Bus	Same as CRC NoBuild
02V-PV	Vermont - (PCBD-Vermont/Shattuck)	15	30	Other TM Bus	Same as CRC NoBuild
03I-205	I205 - (Gateway to CTC via I205)	N/A	N/A		Same as CRC NoBuild
03BRTT	BRT Trunk Route - (PCBD (Union Station)-Milwaukie)	N/A	N/A		Same as CRC NoBuild
04D-P148D	Division - (PCBD-148th/Division)	10	20	Other TM Bus	Same as CRC NoBuild
04D-PGL	Division Limited - (PCBD-GreshamTC)	10	0	Other TM Bus	Same as CRC NoBuild
04D-PGTC	Division - (PCBD-Gresham TC) FB	15	20	Other TM Bus	Same as CRC NoBuild
04D-PGX	Division Express - (PCBD-GreshamTC)				Same as CRC NoBuild
04F-PSTJ	Fessenden - (PCBD-St.Johns) FB	8	12	North Portland TM Bus	Same as CRC NoBuild
05IVAN	Interstate - (PCBD-VancouverTC)				Same as CRC NoBuild
06MLKR	MLK/Rivergate/St.Johns - (PCBD-Rivergate/St.Johns)				Same as CRC NoBuild
06MLKM	MLK/Middlefield - (PCBD-Middlefield)				Same as CRC NoBuild
06MLK-PMEX	MLK/Middlefield - (PCBD-Middlefield/EXPO LRT)				Same as CRC NoBuild
06MLK-EXRSTJ	EXPO/Rivergate/St.Johns - (EXPO LRT-Rivergate/St.Johns)				Same as CRC NoBuild
06MLK-VAN Currently Off-Mall	Collins Cir/MLK/Lomb/Den/Hayd IslD/Vanc (PCBD-Vancouver) FB (Currently Off-Mall)	N/A	N/A		Same as CRC NoBuild
06MLSV - Vancouver via Steel Bridge/MLK	Collins Cir/Mall/SteelBr./RO/MLK/Lomb/Den/Hayd IslD/Vanc (PCBD-Vancouver) FB	10	12	North Portland TM Bus	Same as CRC NoBuild

Comparison of Route Characteristics

07THES-OGCTC	Thiessen - (O.Grove/Concord-CTC)	15	30	Other TM Bus	Same as CRC NoBuild
08NE15-PDKM	NE 15th - (PCBD-9th/Dekum)	N/A	N/A		Same as CRC NoBuild
08NE15-PDPK	NE 15th - (PCBD-Delta Park)	N/A	N/A		Same as CRC NoBuild
08NE15-MID	NE 15th/MLK/Middlefield (PCBD-Middlefield) FB	10	12	Other TM Bus	Same as CRC NoBuild
08JPBR-PBGME	Jackson Park/Barbur TC - (PCBD-Burlingame)	N/A	N/A		Same as CRC NoBuild
08JPVA-PVA	Jackson Park/VA Hospital - (PCBD-VA Hospital) - Only with Tram, otherwise, go to 6/15 FB	10	12	Other TM Bus	Same as CRC NoBuild
09B-P27TH	Broadway - (PCBD-27th/Saratoga)	N/A	N/A		Same as CRC NoBuild
09B-P27TH	Broadway - (PCBD-27th/Saratoga) - via Rose Quarter TC	10	15	Other TM Bus	Same as CRC NoBuild
09P98T-P98PWL	Powell/98th - (PCBD-98th/Powell)	20	30	Other TM Bus	Same as CRC NoBuild
09PGL-PGR - New Limited, no local service	Powell/Gresham Limited all the way to Gresham - (PCBD-GreshamTC)	30	0	Other TM Bus	Same as CRC NoBuild
09PRB (use route from P/F study)	Powell/Gresham TC - (PCBD-GreshamTC) RB	N/A	N/A		Same as CRC NoBuild
09PGTC	Powell/Gresham TC - (PCBD-GreshamTC)FB	20	30	Other TM Bus	Same as CRC NoBuild
09PGX-PGR	Powell/Gresham Express - (PCBD-GreshamTC)	60	0	Other TM Bus	Same as CRC NoBuild
09-PFBRT	Powell/Foster Rapid (PCBD-Damascus)	10	45	Other TM Bus	Same as CRC NoBuild
10H-P122FSTR	Harold - (PCBD-122nd/Foster)	12	15	Other TM Bus	Same as CRC NoBuild
10T-P33	NE 33rd - (PCBD-33rd/Sutherland)	12	15	Other TM Bus	Same as CRC NoBuild
12BARB-PKC	Barbur/King City - (PCBD-King City)	N/A	N/A		Same as CRC NoBuild
12BARB-PSWDX - Current Line 94(PSWDX (PCBD-Sherwood)	Barbur/Sherwood Express - (PCBD-Sherwood)	5	N/A	Other TM Bus	Same as CRC NoBuild
12BARB-PSWD	Barbur/Sherwood - (PCBD-Sherwood)	N/A	N/A		Same as CRC NoBuild
12BARB-PTI	Barbur/Tigard - (PCBD-TigardTC) FB	7.5	12	Other TM Bus	Same as CRC NoBuild
12SG-Gresham	Sandy - (PCBD-Gresham) FB	7.5	12	Other TM Bus	Same as CRC NoBuild
12SP-Parkrose	Sandy - (PCBD-Parkrose)	15	0	Other TM Bus	Same as CRC NoBuild
13PNR92	92nd - (Gateway to CTC via 92nd Avenue)	N/A	N/A		Same as CRC NoBuild
14HS-P94F (use route from P/F study)	Hawthorne Short - (PCBD-94th/Foster) Not on 172nd FB	7.5	10	Other TM Bus	Same as CRC NoBuild
14HL - 14HX to Dam. (use route from P/F study)	Hawthorne Long - (PCBD-Damascus) Not on 172nd	20	30	Other TM Bus	Same as CRC NoBuild
14PFRB (use route from P/F study)	Powell/Foster Rapid Bus RB	N/A	N/A		Same as CRC NoBuild
152M-MTCCTC	Milw. Shuttle -(MTC-CTC) via Lake Rd./Int'l Way/224	N/A	N/A		Same as CRC NoBuild
154WILL-OC	Willamette - (Willamette/W.Linn-Oregon City)	60	60	Other TM Bus	Same as CRC NoBuild
155S-OTCTC/DAM	Sunnyside/Damascus - (147th/OregonTrail-CTC)	30	30	Other TM Bus	Same as CRC NoBuild
156MR-OTCTC	Mather Rd. - (147th/OregonTrail-CTC)	30	30	Other TM Bus	Same as CRC NoBuild
157HV-OTCTC	Happy Valley - (147th/OregonTrail-CTC)	30	30	Other TM Bus	Same as CRC NoBuild
15MTAB-PGTWY	Belmont/Mt Tabor - (PCBD-GatewayTC)	N/A	N/A		Same as CRC NoBuild
15MTXX-PGTWY	Belmont/Mt. Tabor Express - (PCBD-GatewayTC)	N/A	N/A		Same as CRC NoBuild
15MTAB-PRKRS	Belmont/Mt.Tabor/Parkrose via Adventist (PCBD-ParkroseTC) FB	4	10	Other TM Bus	Same as CRC NoBuild
15THUR-P27TH	NW 23rd/Thurman - (PCBD-27th/Thurman)	N/A	N/A		Same as CRC NoBuild
15TMPK-P27MPK	NW 23rd/Montg. Park - (PCBD-27th/Mont.Park) FB	8	10	Other TM Bus	Same as CRC NoBuild
164MT-OHSUTI	Tigard/Marquam Hill - (OHSU-Tigard)	15	N/A	Other TM Bus	Same as CRC NoBuild
166MH-OHSUHLWD	Hollywood/Marquam Hill - (OHSU-HollywoodTC)	15	N/A	Other TM Bus	Same as CRC NoBuild
16FA-PSTJ	Front Ave./St. Johns - (PCBD-St.Johns)	N/A	N/A		Same as CRC NoBuild
16FMID	Front Ave./St. Johns/Marine Dr-(PCBD-Middlefield) via Fess/Col	N/A	N/A		Same as CRC NoBuild
16FMID Off-Mall JJ/JP	Front Ave./St. Johns/Marine Dr-(PCBD-Middlefield) via Fess/Col Off-Mall JJ/JP	30	N/A	North Portland TM Bus	Same as CRC NoBuild

Comparison of Route Characteristics

17H136-P136PWL	Holgate - (PCBD-136th Powell)	10	15	Other TM Bus	Same as CRC NoBuild
1721SI-PSI (SLIN)	NW 21st/Sauvies Island - (PCBD-Sauvies Is.)	20	60	Other TM Bus	Same as CRC NoBuild
1721MP-PMPK (SMPK)	NW21st/Montg. Park - (PCBD-Montgomery Park)	20	60	Other TM Bus	Same as CRC NoBuild
1721SI-PSI (SSJ)	NW 21st/Sauvies Island - (PCBD-Burlington.)				
18HILL-PMCLY	Hillside - (PCBD-Maclay/Burnside)	N/A	N/A		
18HILL-PMCLY Off-Mall	Hillside - (PCBD-Maclay/Burnside) Off-Mall	60	N/A	Other TM Bus	Same as CRC NoBuild
19GLIS-PGT	Glisan - (PCBD-GatewayTC)	10	15	Other TM Bus	Same as CRC NoBuild
19W-PMTSCT	Woodstock - (PCBD-Mt.Scott/112th)	N/A	N/A		Same as CRC NoBuild
19WRHV (use route from P/F study)	Woodstock/Rex - (PCBD-Rex/Extended to Happy Valley)	10	15	Other TM Bus	Same as CRC NoBuild
201ARP	Gateway-Airport Way	N/A	N/A		Same as CRC NoBuild
20B23-BURNGT	Burnside/NW 23rd - (Burnside/23rd-GatewayTC)	N/A	N/A		Same as CRC NoBuild
20BBTC-Gresham	Burnside/Beaverton TC - (BTC-Gresham)	12	15	Other TM Bus	Same as CRC NoBuild
22ROSE-PRGT	Parkrose - (Parkrose-GatewayTC)	45	45	Other TM Bus	Same as CRC NoBuild
23SR223-GTGR	San Rafael/223rd - (GatewayTC-GreshamTC)	60	60	Other TM Bus	Same as CRC NoBuild
24HALS-GTTR	Halsey - (GatewayTC-Troutdale)	N/A	N/A		Same as CRC NoBuild
25GLIS-GTRWD	Glisan/Rockwood - (GatewayTC-RockwoodTC)	60	60	Other TM Bus	Same as CRC NoBuild
26STRK-GTGR	Stark - (GatewayTC-GreshamTC)	N/A	N/A		Same as CRC NoBuild
27MKTM-GTRWD	Market/Main - (GatewayTC-RockwoodTC)	60	60	Other TM Bus	Same as CRC NoBuild
28LWD-MCTC	Linwood - (MTC-CTC)	N/A	N/A		Same as CRC NoBuild
2829LW	28Linwood interline w/ 29Lake/Webster - (CTC-CTC)	20	30	Other TM Bus	Same as CRC NoBuild
29LWEB-MCTC	Lake Webster - (MTC-CTC)	N/A	N/A		Same as CRC NoBuild
30JC-MCTC	Johnson Creek - (MTC via 32nd-CTC)	15	30	Other TM Bus	Same as CRC NoBuild
30CTCO	Holcomb Rd - (CTC-OC) via Holcomb/Bradley/Gronlund/212/224/I205	20	30	Other TM Bus	Same as CRC NoBuild
30 - ESTC (CTC to Estacada portion of current 31)	Estacata (CTC-Estacada)	N/A	N/A		Same as CRC NoBuild
31MHVD (replaces 155)	Happy/Dam - (MTC-CTC-HAPPYV-DAM) via KingRd/82nd/Sunnyside FB btwn mtc-ctc	N/A	N/A		Same as CRC NoBuild
31DAM-PCBD	Damascus - (DAM/CTC-PCBD) via 212/224/82nd/King Rd.	0	0		Same as CRC NoBuild
31EST-PCBD	Estacada - (EST/CTC-PCBD) via 212/224/82nd/King Rd.	0	0		Same as CRC NoBuild
31DAM-MTC	Damascus - (DAM/CTC-MTC) via 212/224/82nd/KingRd.	N/A	N/A		Same as CRC NoBuild
31EST-MTC	Estacada - (EST/CTC-MTC) via 212/224/82nd/KingRd.	20	30	Other TM Bus	Same as CRC NoBuild
31NHOPE-PCBD	New Hope - (N.HOPE-PCBD) via 212/224/82nd/KingRd.	0	0		Same as CRC NoBuild
31NHOPE-MTC	New Hope - (N.HOPE-MTC) via 212/224/82nd/KingRd.	10	0	Other TM Bus	Same as CRC NoBuild
3133OD	33Or.City/CCC interline w/ 31Damascus - (DAM/CTC-OC/CCC) via 212/224/82nd/KingRd.	15	15	Other TM Bus	Same as CRC NoBuild
32OC-PCBD	Oatfield - (OC-PCBD)	0	0		Same as CRC NoBuild
32OC-MTC	Oatfield - (OC-MTC)	15	30	Other TM Bus	Same as CRC NoBuild
33M OC-PCBD	McLoughlin - (OC-PCBD)	N/A	N/A		Same as CRC NoBuild
33M OC-MTC	McLoughlin - (OC-MTC)	N/A	N/A		Same as CRC NoBuild
33M OC-PCBD Off-Mall	McLoughlin - (OC-PCBD) Off-Mall	0	0		Same as CRC NoBuild
33M OC-MTC Off-Mall	McLoughlin - (OC-MTC) Off-Mall	0	0		Same as CRC NoBuild
320-MOC	Oatfield - (MTC-OC) FB	15	15	Other TM Bus	Same as CRC NoBuild

Comparison of Route Characteristics

33M-POC	McLoughlin - (PCBD-OC)	N/A	N/A		Same as CRC NoBuild
33M-PC	McLoughlin - (PCBD-CCC)	N/A	N/A		Same as CRC NoBuild
33M-HCBS	McLoughlin - (PCBD-CCC) use 99 route (no Portland Ave)	N/A	N/A		Same as CRC NoBuild
33M OC-MTC	McLoughlin - (OC-MTC) FB	8	12	Other TM Bus	Same as CRC NoBuild
33F-PGTC	Fremont - (PCBD-GTC)	12	15	North Portland TM Bus	Same as CRC NoBuild
34R-MOC	River Rd. - (MTC-OC)	N/A	N/A		Same as CRC NoBuild
34R152	34River Rd. interline w/ 152Milwaukie Shuttle - (OC-GTC)	20	30	Other TM Bus	Same as CRC NoBuild
35MAC-POC	Macadam - (PCBD-OC) FB (no service to Canby)	7.5	15	Other TM Bus	Same as CRC NoBuild
35MAC-CAN	Macadam - (PCBD-Canby)	N/A	N/A		Same as CRC NoBuild
36SS-LOTU	South Shore - (LakeO-Tual-PCBD) to PCBD per JC Equil.	15	30	Other TM Bus	Same as CRC NoBuild
37NS-LOTU	North Shore - (LakeO-Tual)	N/A	N/A		Same as CRC NoBuild
37NS-LBF - New Routing	North Shore - (LakeO-Tual/PNR) via Cclub/LowerBoones	45	45	Other TM Bus	Same as CRC NoBuild
38BOON-PTU	Boones Ferry - (PCBD-Tual)	N/A	N/A		Same as CRC NoBuild
38BOON-PTU (See Line 50TIGTUAL) Term. @ Tigard NOT Tual.	Boones Ferry - (PCBD-Tigard TC) Via Kruse/72nd/Hunziker/Hall	20	30	Other TM Bus	Same as CRC NoBuild
38BOON-PTU (See Line 50TIGTUAL) Term. @ Tigard NOT Tual. Off-Mall	Boones Ferry - (PCBD-Tigard TC) Via Kruse/72nd/Hunziker/Hall Off-Mall	20	30	Other TM Bus	Same as CRC NoBuild
39LNC-LCBU	Lewis and Clark - (L&C College-BurlingameTC)	30	30	Other TM Bus	Same as CRC NoBuild
40MOCK-PSTJ	Mocks Crest - (PCBD-St.Johns)	15	15	North Portland TM Bus	Same as CRC NoBuild
40TAC-PM	Tacoma - (PCBD-MTC)	N/A	N/A		Same as CRC NoBuild
40TAC-PM Off-Mall stay on Macadam/Moody	Tacoma - (PCBD-MTC) Off-Mall stay on Macadam/Moody	15	15	Other TM Bus	Same as CRC NoBuild
42CMS	Cedar Mill Shuttle - (SunsetTC-CM) - Saltzman/Thompson/143/107th	30	N/A	Other TM Bus	Same as CRC NoBuild
43TFN -PWSQN	Taylor's Ferry Nimbus - (PCBD-WashSq./Nimbus)	60	N/A	Other TM Bus	Same as CRC NoBuild
43TF-PWSQ	Taylor's Ferry - (PCBD-WashSq.)	60	30	Other TM Bus	Same as CRC NoBuild
43TFN -PWSQN Off-Mall JJ/RP	Taylor's Ferry Nimbus - (PCBD-WashSq./Nimbus) Off-Mall JJ/RP	60	N/A	Other TM Bus	Same as CRC NoBuild
43TF-PWSQ Off-Mall JJ/RP	Taylor's Ferry - (PCBD-WashSq.) Off-Mall JJ/RP	60	30	Other TM Bus	Same as CRC NoBuild
44CHWY-PPCCC (formally known as 41CHWY)	Capital Hwy. - (PCBD-PCC Sylvania)	10	15	Other TM Bus	Same as CRC NoBuild
45G-PTI	Garden Home - (PCBD-Tigard)	15	30	Other TM Bus	Same as CRC NoBuild
46NH-FHI	North Hillsboro - (WashCo Fairgrounds-Hillsboro)	45	45	Other TM Bus	Same as CRC NoBuild
47BLEV-WC185	Baseline/Evergreen - (WillowCrk/185th-Hillsboro)	30	30	Other TM Bus	Same as CRC NoBuild
48CORN-WC185	Cornell Rd. - (WillowCrk./185th-Hillsboro)	30	30	Other TM Bus	Same as CRC NoBuild
49QS	Quatama - (Amberglen-Quantama)	N/A	N/A		Same as CRC NoBuild
50COS	Cornell Oaks Shuttle -(Merlo/185th-Cornell Oaks)	N/A	N/A		Same as CRC NoBuild
50TIGTUAL (see map)	Tigard-Tualatin (TigTC-TualMhwk) via Com Rail/Lboones/72nd/Hwy99	30	30	Other TM Bus	Same as CRC NoBuild
51V-PCCPL	Vista - (PCBD- Council Crest-Patrick Place)	30	N/A	Other TM Bus	Same as CRC NoBuild
51V-PCCDSH	Vista - (PCBD-Council Crest-Dosch)	30	60	Other TM Bus	Same as CRC NoBuild
51V-PCCPL Off-Mall	Vista - (PCBD- Council Crest-Patrick Place) Off-Mall	30	N/A	Other TM Bus	Same as CRC NoBuild
51V-PCCDSH Off-Mall	Vista - (PCBD-Council Crest-Dosch) Off-Mall	30	60	Other TM Bus	Same as CRC NoBuild
52FARM-F185	Farmington-185th (BTC-PCC Rock Crk.)	15	15	Other TM Bus	Same as CRC NoBuild
53ALLN-BA	Artic/Allen - (BTC-Allen/Mercer Ind.)	30	N/A	Other TM Bus	Same as CRC NoBuild
54BH-PB	B-H Hwy. (PCBD-BTC) FB	15	15	Other TM Bus	Same as CRC NoBuild

Comparison of Route Characteristics

55HAML-PRH	Hamilton - (PCBD-Scholls/Hamilton)	N/A	N/A		
55HAML-PRH Off-Mall JJ/RP	Hamilton - (PCBD-Scholls/Hamilton) Off-Mall JJ/RP	30	N/A	Other TM Bus	Same as CRC NoBuild
56SF-PWSQ	Scholls Ferry - (PCBD-WashSq.) FB	20	30	Other TM Bus	Same as CRC NoBuild
57FFGV-BFG	Forest Grove - (BTC-Forest Gr.) FB	10	15	Other TM Bus	Same as CRC NoBuild
58CANY-PB	Canyon Rd. - (PCBD-BTC)	15	30	Other TM Bus	Same as CRC NoBuild
59WPCH-WCSUN	Walker/Parkway/Cedar Hills - (Willow Crk./185th-SunsetTC)	30	30	Other TM Bus	Same as CRC NoBuild
60L	Leahy - (Cornell-SusetTC)	45	N/A	Other TM Bus	Same as CRC NoBuild
61XMAR-MHB	BTC-B-H Hwy. - (Marquam Hill/OHSU-BTC)	30	N/A	Other TM Bus	Same as CRC NoBuild
62MRBV	Murray Blvd - (WashSq.-Sunset TC)	15	30	Other TM Bus	Same as CRC NoBuild
63ZOO	Washington Park (PCBD-Zoo)	60	60	Other TM Bus	Same as CRC NoBuild
63WOM-RQZOO - New 63WP	Washington Park - (PCBD-Zoo)				Same as CRC NoBuild
63WOM-RQZOO - New 63WP Off-Mall	Washington Park - (PCBD-Zoo) Off-Mall				Same as CRC NoBuild
67J158-BPCC	Jenkins/158th - (BTC-PCC Rock Crk.)	30	30	Other TM Bus	Same as CRC NoBuild
68CMH-POHSU	Collins Circle - (PCBD-OHSU/VA Hospital)	N/A	N/A		Same as CRC NoBuild
68CMH-POHSU Off-Mall	Collins Circle - (PCBD-OHSU/VA Hospital) Off-Mall	10	N/A	Other TM Bus	Same as CRC NoBuild
70T13	12th Ave. - (RoseQtr.-MTC) via 13th	30	30	Other TM Bus	Same as CRC NoBuild
70T17	12th Ave. - (RoseQtr.-MTC) via 17th	30	30	Other TM Bus	Same as CRC NoBuild
71P122	60th/122nd - (Woodstock/94th-CTC) via Parkrose LRT	15	15	Other TM Bus	Same as CRC NoBuild
72K82	82nd/Killingsworth - (Swan Is.-CTC) FB	10	12	North Portland TM Bus	Same as CRC NoBuild
74X	SE Portland/Lloyd - (LloydCntr/RoseQtr-Woodstock/52nd)	30	N/A	Other TM Bus	Same as CRC NoBuild
75TMTC	39th/Lombard - (St.Johns-MTC) FB	15	15	North Portland TM Bus	Same as CRC NoBuild
76BVTU	Beaverton/Tualatin - (BTC-Tualatin TC) FB	12	15	Other TM Bus	Same as CRC NoBuild
77NTRDL	Broadway/Lovejoy - (Troutdale-Montgomery Park)	12	15	Other TM Bus	Same as CRC NoBuild
78LOBV	Beaverton/LakeO - (BTC-Lake Oswego)	N/A	N/A		Same as CRC NoBuild
78LOTIG (same as today's 78 but terminates at Tigard TC)	Tigard/LakeO - (TigardTC-Lake Oswego)	30	30	Other TM Bus	Same as CRC NoBuild
79OC (should be same route as today)	CTC/OC - (CTC-Or.City) via Gladstone - South End Loop FB	15	15	Other TM Bus	Same as CRC NoBuild
80TTRT	Kane Rd. - (GreshamTC-Troutdale) via Springwater	20	30	Other TM Bus	Same as CRC NoBuild
87R181 - New Routing (see map and P/F study)	181st Ave. - (Alderwood/Damascus) via Airport/181st/182nd - no Rockwood	15	N/A		Same as CRC NoBuild
87R182 (see map and P/F study)	181st/182nd - (Sandy-Damascus)	N/A	15	Other TM Bus	Same as CRC NoBuild
88H198	198th/Hart - (Willow Crk./185thTC-BTC)	30	30	Other TM Bus	Same as CRC NoBuild
89RKN	Tanasbourne/North - (Tanasbourne-SunsetTC)	30	60	Other TM Bus	Same as CRC NoBuild
89RKS	Tanasbourne/South - (Tanasbourne-SunsetTC)	30	60	Other TM Bus	Same as CRC NoBuild
92X	South Beaverton Express - (Murray Hill-PCBD)	20	N/A	Other TM Bus	Same as CRC NoBuild
95X	Tigard/I-5 Express (PCBD/Lloyd District-Sherwood)	N/A	N/A		Same as CRC NoBuild
96TUAL	Tualatin/I-5 - (PCBD-Tualatin)	15	30	Other TM Bus	Same as CRC NoBuild
96WILS	N. Wilsonville/I-5 - (PCBD-N.Wilsonville)	15	30	Other TM Bus	Same as CRC NoBuild
99MXP	McLoughlin Express - (PCBD-OC/CCC)	0	0		Same as CRC NoBuild

Comparison of Route Characteristics

99MXM	McLoughlin Express - (MTC-OC/CCC) Kellogg & Main St. stops	15	0	Other TM Bus	Same as CRC NoBuild
201WILS	SMART/BARBUR	10	30	Other TM Bus	Same as CRC NoBuild
202WIL	SMART/Oregon City	10	30	Other TM Bus	Same as CRC NoBuild
203WIL	SMART/Wilsnvle. Rd.	10	30	Other TM Bus	Same as CRC NoBuild
204WIL	SMART/Wilsnvle. Rd.	10	30	Other TM Bus	Same as CRC NoBuild
300SES	Sandy-Estacada	120	120	Other TM Bus	Same as CRC NoBuild
300SGR	Sandy-Gresham	30	60	Other TM Bus	Same as CRC NoBuild
400CAN	Canby (Canby-OCTC)	30	30	Other TM Bus	Same as CRC NoBuild
C-TRAN BUSES					
1	Fruit Valley	30	30	CTRAN Local	Alt 5
2	Lincoln	30	30	CTRAN Local	Alt 5
2C	Felida/Salmon Creek Circulator	60	60	CTRAN Local	Alt 5
3	City Center	15	15	CTRAN Local	Alt 5
4	Fourth Plain - DT/Van Mall	15	15	CTRAN Local	Alt 5
4X	Fourth Plain - DT/Fisher's Landing	30	30	CTRAN Local	Alt 5
4L	Fourth Plain - DT/Van Mall (Limited Stop)	15	30	CTRAN Local	Alt 5
6	Hazel Dell to 99th	15	15	CTRAN Local	Alt 5
7	Battle Ground	30	30	CTRAN Local	Alt 5
7C	Battle Ground Circulator	30	30	CTRAN Local	Alt 5
18	Fishers to Med. Center	30	30	CTRAN Local	Alt 5
24	CC P&R/downtown Vancouver via Minnehaha	20	30	CTRAN Local	Alt 5
25	St Johns/Clark Co/99th/WSU	20	20	CTRAN Local	Alt 5
30	Burton (Fishers to VanCBD)	15	20	CTRAN Local	Alt 5
32	Van Mall/VanCBD (Interline w/ 80)	15	30	CTRAN Local	Alt 5
37	Mill Plain	15	15	CTRAN Local	Alt 5
37L	Mill Plain (Limited Stop)	15	15	CTRAN Local	Alt 5
39	Clark Coll/Med. Center/Van Mall	30	30	CTRAN Local	Alt 5
71	Highway 99	10	15	CTRAN Local	Opt 6
76A	Orchards/Eastridge	15	30	CTRAN Local	Alt 5
76B	Orchards/Eastridge	15	30	CTRAN Local	Alt 5
78	78th Street/Van Mall/Evergreen	30	30	CTRAN Local	Alt 5
80	Van Mall/112th (Interline with 32)	15	30	CTRAN Local	Alt 5
92	Camas/Washougal	30	60	CTRAN Local	Alt 5
93	SE 34th/Lacamas	60	60	CTRAN Local	Opt 6
100	I-5 Shuttle (PIR/Kiggins/99th/134th/219th)	30	60	CTRAN I-5	Alt 5
105X	I-5 Shuttle to PCBD	10	30	CTRAN I-5	Opt 6
114X	Camas/Washougal Exp	20	60	CTRAN I-5	Opt 6
134X	Salmon Creek Exp to PCBD	12	60	CTRAN I-5	Opt 6
155X	Kiggins Exp to Ptlid	10	60	CTRAN I-5	Opt 6
164X	Fishers Exp to PCBD	7.5	60	CTRAN I-205	Opt 6
165X	Fishers/Gateway Limited	20	30	CTRAN I-205	Opt 6
173X	BG Exp/VanCBD	20	60	CTRAN I-5	Opt 6
175X	Evergreen Exp to PCBD	10	60	CTRAN I-205	Opt 6
183X	Central P&R Express to PCBD	15	60	CTRAN I-205	Opt 6
190X	Van Mall/Kiggins/Marquam Hill	30	60	CTRAN I-5	Opt 6
191X	SWAN ISLAND EXP	30	60	CTRAN I-5	Opt 6
199X	99th Express to PCBD	15	60	CTRAN I-5	Opt 6
200	I-205 Shuttle	30	60	CTRAN I-205	New
219X	219th Express to Ptlid	15	60	CTRAN I-5	Opt 6

Alt 5 refers to the C-TRAN Draft 2023 TDP Alternative 5
 Opt. 6 refers to the I-5 Transportation and Trade Partnership 2020 Option 6

 means altered headways
 means a new line
 means I-5 Interstate Bridge Crossing
 means I-205 Glenn Jackson Bridge Crossing